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10/675,152

09/29/2003

Robert C. Glenn

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03/22/2005

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EXAMINER

CHANG, JOSEPH

ART UNIT

PAPER NUMBER

2817

DATE MAILED: 03/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/675,152

Applicant(s)

GLENN, ROBERT C.

Examiner

Joseph Chang

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11, 16-19 and 22 is/are rejected.
- 7) ☒ Claim(s) 12-15, 20 and 21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Justice et al. US20020167362 A1.

Regarding Claim 9, Justice et al. discloses an apparatus (Fig.7) comprising a switch capacitor circuit (32) to generate a first output capacitance based on a control signal (Vtune); a main loop circuit (24, Vtune, 30, VCO 26) to generate an output signal (the bottom line of outputs of 30) based on the control signal (Vtune); and an oscillating circuit (26) to generate an oscillating signal (RFout), a frequency of the oscillating signal based at least on the first output capacitance (first capacitance (top switch capacitor) and the output signal (the bottom line of outputs of 30).

Regarding method claim 1, the apparatus shown in Fig.7 is inherently performs the method claimed because the structure is the same as the device recited in the claim.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-8, 10,11, 16-19, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Justice et al. in view of Jeddeloh.

Regarding Claim 10, as discussed above, Justice et al. discloses an apparatus as recited including low pass filter 24. However, a charge pump is not explicitly disclosed. As would have been well known in the art, block 24 would have been recognized as a low pass filter with a charge pump because the charge pump is necessarily present in the low pass filter 24 which generate the control signal (Vtune), wherein the control signal (Vtune) is based on the frequency of the oscillating signal (see feedback loop from VCO) and on a reference frequency (IF).

Regarding Claim 11, Figure 7 shows a detector (22), a first frequency (feedback signal from VCO 26), the reference frequency (IF), a difference (output of 22) the first frequency (feedback signal from VCO 26) and the reference frequency (IF).

Regarding Claim 16, Figure 7 shows the capacitor switch circuit 32 to change the first output capacitance to a second output capacitance (second one) if it is determined that the main loop circuit has reached a threshold point (see Figures 3,4,6) in its tuning range. (See Para [0017]).

Regarding Claim 17, Figure 7 and table 1 and page 3 discloses the capacitor switch circuit (32) to change the second output capacitance to a third output capacitance (third one) if it is determined that the main loop circuit has reached the threshold point in its tuning range (see Table 1).

Regarding Claims 2-8, the methods recited in claims 2-8 are inherently present in the structure.

Regarding Claims 18, 19, as noted above in the claim 9 rejection, Justice et al. discloses a switch capacitor circuit, a main loop circuit, and an oscillating circuit. Justice et al further discloses a transceiver (Para [0002]) to transmit and receive data and a processor to process the data (inherently present in the transceiver). However, Justice et al. does not disclose a double data rate memory. As would have been well known in the art, such device known as DDR provides fast memory access without losing the ability to move quickly to obtain bursts of data. Therefore, it would have been obvious to one of ordinary skill in the art to use a double data rate memory because such modification would have provided fast memory access without losing the ability to move quickly to obtain bursts of data as taught by Jeddeloh.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Justice et al. as applied to claim 18 above, and further in view of Koenig et al.

As noted above, Justice et al. and Jeddeloh disclose the system as recited. However, a framer is not disclosed. As would have been well known in the art, a framer is to decapitate/encapsulate data by transceiver. For example, Koenig et al. shows telecommunication device including a framer. Accordingly, it would have been obvious to one of ordinary skill in the art to use a framer to the system of Justice et al. in view of Jeddeloh because such a modification would have been necessary to de-capsulate or encapsulate data by the transceiver of Justice et al.

***Allowable Subject Matter***

Claims 12-15, 20 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the best prior art of record, Justice et al, taken alone or in combination of other references, does not teach or fairly suggest a second switch to couple the main loop circuit to the control signal and to decouple the main loop circuit from the control signal.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Gomez discloses PLL with a switch capacitor circuit.

Lanoman et al. discloses a DCO using a digital control word.

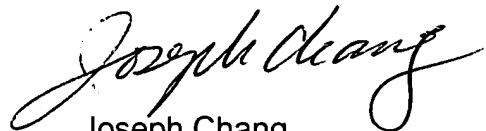
Jansson discloses an IC having digitally controlling capacitance.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Chang whose telephone number is 571 272-1759. The examiner can normally be reached on Mon-Fri 0700-1730.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571) 272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, reading "Joseph Chang". The signature is fluid and cursive, with the first name "Joseph" and last name "Chang" clearly distinguishable.

Joseph Chang  
Patent Examiner  
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